

Abstract

Transmitters for Portable Communication Devices

5 A polar loop transmitter includes separate phase and envelope paths providing a linearising scheme for an efficient non-linear power amplifier. Loop filters are included in each of the phase and envelope paths to enable the path characteristics to be matched to one another. A polar loop transmitter and other types of envelope elimination and restoration transmitters control the output envelope of the power amplifier by connecting the output of the envelope detector, or in an envelope
10 feedback transmitter, the envelope error signal, to the bias control input of the power amplifier. The transmitter can further include compensation means for compensating for non-linearities in the envelope control means and a loss of feedback control detector to ensure that the feedback signal remains within acceptable limits.

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